

PATENT
 USSN 10/044,692
 TTC Docket 002640US
 Geron Docket 018/213c

Claim Amendments

1. ~~(Currently amended) An immunogenic composition comprising:~~
 - ~~a) human telomerase reverse transcriptase (hTERT) protein (SEQ. ID NO:2);~~
 - ~~b) an immunogenic polypeptide fragment of hTERT consisting of an amino acid sequence identical to at least 20 contiguous amino acids of SEQ. ID NO:2;~~
 - ~~c) a chimeric protein consisting of an amino acid sequence identical to at least 20 contiguous amino acids of SEQ. ID NO:2 fused with an amino acid sequence of another protein;~~or
 - ~~d) a nucleic acid encoding any of a), b) or c)~~

A composition comprising an isolated recombinant nucleic acid that encodes:

- a) human telomerase reverse transcriptase (hTERT) protein (SEQ. ID NO:2); or
 - b) a polypeptide fragment consisting of at least 20 contiguous amino acids of SEQ. ID NO:2
- which is immunogenic for a specific response against hTERT (SEQ. ID NO:2).

2 to 9. CANCELLED

10. ~~(Currently amended) The pharmaceutical composition of claim 1, further comprising an adjuvant.~~

11 to 18. CANCELLED

19. ~~(Currently amended) The composition of claim 1, in an amount wherein said protein, polypeptide, or nucleic acid is effective for eliciting an immunological response specific for telomerase reverse transcriptase~~ hTERT protein ~~in a mammalian subject.~~

20. ~~(Original) The composition of claim 1, packaged in a container along with an indication of how the composition is to be administered.~~

21. ~~(Currently amended) An immunogenic composition comprising a nucleic acid that encodes:~~
 - ~~a) hTERT protein (SEQ. ID NO:2);~~
 - ~~b) an immunogenic polypeptide fragment of hTERT consisting of an amino acid sequence identical to at least 20 contiguous amino acids of SEQ. ID NO:2; or~~
 - ~~c) a chimeric protein consisting of an amino acid sequence identical to at least 20 contiguous amino acids of SEQ. ID NO:2 fused with an amino acid sequence of another protein~~

A composition comprising an isolated recombinant nucleic acid that encodes a polypeptide fragment consisting essentially of at least 10 contiguous amino acids of SEQ. ID NO:2 which is immunogenic for a specific response against hTERT (SEQ. ID NO:2).

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22. *(Currently amended)* The nucleic acid composition of ~~claim 21~~ claim 1, wherein the nucleic acid encodes full-length hTERT protein (SEQ. ID NO:2).
23. *(Currently amended)* The nucleic acid composition of claim 21, wherein the nucleic acid ~~encodes an immunogenic polypeptide fragment of hTERT consisting of an amino acid sequence identical to at least 20 contiguous amino acids of SEQ. ID NO:2~~
encodes a polypeptide fragment consisting essentially of at least 20 contiguous amino acids of SEQ. ID NO:2.
24. *(Currently amended)* The nucleic acid composition of claim 21, wherein the nucleic acid ~~encodes an immunogenic polypeptide fragment of hTERT consisting of an amino acid sequence identical to at least 50 contiguous amino acids of SEQ. ID NO:2~~
encodes a polypeptide fragment consisting essentially of at least 50 contiguous amino acids of SEQ. ID NO:2.
25. *(Currently amended)* ~~The nucleic acid composition of claim 21, wherein the nucleic acid A composition comprising an isolated nucleic acid that encodes a chimeric protein consisting of an amino acid sequence identical to at least 20 contiguous amino acids of SEQ. ID NO:2 fused with an amino acid sequence of another protein consisting of an immunogenic fragment of SEQ. ID NO:2 fused to another protein that enhances the immune response to said fragment of SEQ. ID NO:2.~~
26. *(Previously presented)* The nucleic acid composition of claim 25, wherein the other protein is keyhole limpet hemocyanin (KLH).
27. *(Currently amended)* The nucleic acid composition of ~~claim 21~~ claim 1, wherein the nucleic acid is DNA.
28. *(Currently amended)* The nucleic acid composition of ~~claim 21~~ claim 1, wherein the nucleic acid is RNA.
29. *(Currently amended)* The nucleic acid composition of ~~claim 21~~ claim 1, wherein the nucleic acid is contained in a plasmid.
30. *(Currently amended)* The nucleic acid composition of ~~claim 21~~ claim 1, wherein the nucleic acid is contained in a viral vector.

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31. *(Currently amended)* The nucleic acid composition of ~~claim 24~~ claim 1, wherein the nucleic acid is contained in an adenovirus vector.
32. *(Currently amended)* The nucleic acid composition of ~~claim 24~~ claim 1, wherein the nucleic acid is contained in a herpes virus or Epstein Barr Virus vector.
33. *(Currently amended)* The nucleic acid composition of ~~claim 24~~ claim 1, wherein the nucleic acid further comprises a promoter to control expression of said hTRT protein or fragment.
- 34 to 38. **CANCELLED**

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39. (New) An isolated recombinant nucleic acid that encodes:
 - a) human telomerase reverse transcriptase (hTERT) protein (SEQ. ID NO:2); or
 - b) a polypeptide fragment consisting essentially of an amino acid sequence encoded in at least 100 consecutive bases of SEQ. ID NO:1, which is immunogenic for a specific response against hTERT (SEQ. ID NO:2).
40. (New) The nucleic acid of claim 39, which encodes at least 100 consecutive bases of SEQ. ID NO:1.
41. (New) An isolated recombinant nucleic acid comprising a promoter and a sequence encoding an hTERT peptide fragment,
 - wherein said encoding sequence consists essentially of at least 50 consecutive bases of SEQ. ID NO:1;
 - wherein said promoter controls expression of said encoding sequence;
 - and wherein said peptide fragment is immunogenic for a specific response against hTERT (SEQ. ID NO:2).
42. (New) The nucleic acid of claim 41, wherein said encoding sequence consists essentially of at least 200 consecutive bases of SEQ. ID NO:1.
43. (New) An isolated recombinant nucleic acid that encodes a polypeptide consisting essentially of at least 10 contiguous amino acids of SEQ. ID NO:2, wherein said polypeptide does not have telomerase catalytic activity when cotranslated with telomerase RNA component (hTR), but is immunogenic for a specific response against hTERT (SEQ. ID NO:2).
44. (New) The nucleic acid of claim 43, encoding a polypeptide fragment consisting essentially of at least 20 contiguous amino acids of SEQ. ID NO:2.
45. (New) The nucleic acid of claim 43, encoding a polypeptide fragment consisting essentially of at least 50 contiguous amino acids of SEQ. ID NO:2.
46. (New) The nucleic acid of claim 43, encoding a full-length telomerase protein with a mutation or deletion of the FFYxTE motif (SEQ. ID NO:127) or the DD motif.
47. (New) The nucleic acid of claim 43, further comprising a promoter to control expression of said polypeptide.

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48. (New) The nucleic acid of claim 43, contained in a plasmid vector.
49. (New) The nucleic acid of claim 43, contained in a viral vector.
50. (New) The nucleic acid of claim 43, contained in an adenovirus vector, a herpes virus vector, or Epstein Barr Virus vector.
51. (New) The composition of claim 25, wherein said nucleic acid further comprises a promoter to control expression of said chimeric protein.
52. (New) The composition of claim 25, wherein the nucleic acid is contained in a plasmid vector.
53. (New) The composition of claim 25, wherein the nucleic acid is contained in a viral vector.
54. (New) The composition of claim 25, wherein the nucleic acid is contained in an adenovirus vector, a herpes virus vector, or Epstein Barr Virus vector.